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Camp builds bridge of interest in engineering

Delta academy is the only one of its kind in the state

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MUNCIE -- The next generation of engineers tossed eggs, built catapults, and watched the wind blow this week.

Along the way, they also completed math equations, studied angles and measured electric currents inside the engineering classrooms at Delta High School, home of the state's only Gateway Academy summer camp for middle school students.

The academy is designed to make young students aware of engineering, encourage them to follow a specialized, advanced curriculum once they advance to high school which earns them dual credit in college, and ultimately inspire them through college into a career.

Like anything, it's up to teachers like Randy Glaze to show students how learning these things, even when they're difficult, can be fun. For the past two weeks he's lead two camps from his Delta classroom, for 32 students, thanks to a $5,000 grant from the Society of Manufacturing Engineers.

This is the second year of the camp at Delta, and Glaze said he knows it works -- more middle school students are interested in engineering once it's over. It happened immediately after last summer's camp.

"It created more interest," said Glaze. "It gives them a taste."

The camp certainly worked for Kaitlin Clawson. The Delta sophomore attended the camp a year ago, and this past year as a freshman enrolled in an introduction to engineering and design class. She has more engineering classes on her class schedule this next year too. This week she's worked as an aide and mentor in the middle school camp.

"It's an intense class. It's a lot harder, but I'm getting so much out of it," Kaitlin said.

Mike Fitzgerald, the engineering and technology education specialist for the Indiana Department of Education, said the Gateway Academy is a perfect example of hands-on learning.

"We're trying to inspire kids with the hands-on, minds-on approach," Fitzgerald said. "You're trying to inspire them to becoming the next generation of scientists and engineers."

On the last day of camp, Kaitlin was among the high school students working with the middle school engineers. On this day, they were building wind turbines, then testing how much power the turbines generated when its blades were powered by a fan.

Building a miniature wind turbine is tough enough. But then building it so that its blades spin freely is another matter, as students Erica Davison and Matt Nichols learned. They tweaked the blades and moved the motor over and over again. But when they put it in front of a fan to propel its blades, there

was a constant click, click, click. The blades kept hitting the turbine's base.

"It's trial and error," said Erica, who deduced the blades were set and bent at the wrong angle.

"Or error and error, and error, and error," said Matt as he tweaked the blades.
